

REMARKS

Claims 1-2, 17, 20 and 27 have been rejected under 35 USC 102(e) as anticipated by Smith (U.S. Patent No. 6,009,124). In this regard, we note that the Examiner mistakenly labeled the rejection as "Claim Rejection- 35 USC § 112." However, we have treated the rejection under 35 USC § 102. The rejection is respectfully traversed.

The present invention requires information about user signals be obtained from the received signals, and requires information about interference signals to be obtained from the received signals and the information about the user signals which were previously obtained. The information about the interference signals is then used for generating a directional pattern for transmission. In one embodiment, these functions are performed within the receiver. The receiver therefore incorporates a transmission unit for which the directional pattern recited in claim 1 is used. Referring to page 7 of the English translation, the interference is described as being used for generating directions patterns. According to the specification, in duplex systems, each receiver is paired with a transmitter. Hence, each station which participates in the communication has both a receiver and a transmitter. Turning to page 8 of the specification, it is disclosed that the information about the received interference can be used to drive the antennas in the transmitting case. Hence, the directional patterns derived from the information about the interference signals can be used for transmission purposes at the receiver.

Smith discloses a high data rate communication system which employs an adaptive sectored antenna. However, Smith fails to disclose the features in the last five lines of claim 1, namely, that information about the interference signals is obtained from both the received signals and the information obtained about the user signals at an earlier time. Smith also fails to disclose generation of a directional pattern with the aid of the interference signals and using the directional patterns for transmission at the receiver of the user and interference signals. Rather, the units shown in Figures 1 and 2 of Smith operate as explained with reference to Figure 3. According to Figure 3, block 304 is tested if the bit error rate BER is sufficiently low. If it is tested (i.e. "yes"), the strength of the received signal (RSSI) is sufficiently high. If the answer in

both cases is "yes," then the current position of the steered antenna is kept and the data is declared valid. If the answer to one of the questions is "no," then the adaptive antenna is steered by a predetermined amount. By following the procedure, the influence of the external interference is reduced. Hence, Smith fails to disclose the features of claim 1 (and 27).

Since the recited structure and method are not disclosed by the applied reference, claims 1 and 27 are patentable. All claims depending therefrom are similarly patentable.

Claims 3-5, 18 and 19 have been rejected under 35 USC 103(a) as unpatentable over Smith in view of Van Heeswyk (U.S. Patent No. 6,333,947). The rejection is respectfully traversed for the same reasons presented above, and for the following. Van Heeswyk is cited as disclosing an interference cancellation circuit and an amplitude weighting function. However, Van Heeswyk fails to disclose the features in the last five lines of claim 1, namely, that information about the interference signals is obtained from both the received signals and the information obtained about the user signals at an earlier time. Van Heeswyk also fails to disclose generation of a directional pattern with the aid of the interference signals and using the directional patterns for transmission at the receiver of the user and interference signals. Hence, claims 3-5, 18 and 19 are patentable independently from claim 1.

Claims 8, 12, 13, 16, 21 and 22 have been rejected under 35 USC 103(a) as unpatentable over Smith in view of Raleigh (U.S. Patent No. 6,144,711). The rejection is respectfully traversed for the same reasons presented above, and for the following. Raleigh is cited as disclosing a space-time signal processing system having multiple transmitter antenna elements and/or receiver elements, and as disclosing a preferable measure of the interference present in the so-called interference spatial covariance matrix. However, Raleigh fails to disclose the features in the last five lines of claim 1, namely, that information about the interference signals is obtained from both the received signals and the information obtained about the user signals at an earlier time. Raleigh also fails to disclose generation of a directional pattern with the aid of the interference signals and using the directional patterns for transmission at the receiver of the user

and interference signals. Hence, claims 8, 12, 13, 16, 21 and 22 are patentable independently of claim 1.

The drawings have been objected to in the Office Action. New drawings are submitted herewith, replacing German labels with English labels.

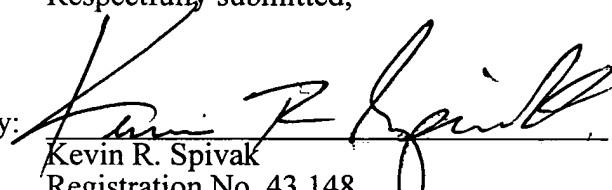
Claims 9-11 are objected to but would be allowable if rewritten in independent form to include any base and intervening claims.

In view of the foregoing, claims 1-5, 8-13, 16-22 and 27 are in condition for allowance. An indication of the same is solicited.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made".

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, Applicant petitions for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 449122009400.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Please amend the claims as follows.

1. (Amended) A method for the wireless data transmission using at least one transmitter and at least one receiver, the receiver having one or more receiving antennas comprising:
 - utilizing information on received interference signals to improve the quality of transmission of the data transmission;
 - obtaining quantitative information about received user signals from the received signals of one of the antennas by using a first signal processing algorithm; and
 - obtaining quantitative information about the received interference signals from the received signals of one of the antennas and the quantitative information obtained about the received user signals by using a second signal processing algorithm wherein the quantitative information about the received interference signals is used to generate a directional pattern [at the transmitter] for transmission at the receiver.